

Remarks/Arguments

Applicants have received and carefully reviewed the Office Action of the Examiner mailed June 19, 2009. Currently, claims 1-3, 5-7, 9, 16-26, and 33-36 remain pending of which claims 3, 7, 18, 22, 23, and 26 were previously withdrawn. Claims 1, 2, 5, 6, 9, 16, 17, 19-21, 24, 25, and 33-36 have been rejected. Favorable consideration of the following remarks is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 16, 17, 20, 21, 25, and 33-35 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft et al. (U.S. Patent No. 6,007,558), hereinafter Ravenscroft, in view of Suon et al. (U.S. Patent No. 6,342,062), hereinafter Suon. After careful review, Applicant must respectfully traverse this rejection.

“All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). (MPEP § 2143.03). Nowhere does Ravenscroft appear to disclose “a retrieval apparatus for retrieving or repositioning the blood clot filter device within the blood vessel, the retrieval apparatus including an inner member configured to grasp the apical head, a middle tubular member configured to engage the hub, and an outer sheath for encapsulating the blood clot filter device”. The Examiner has asserted that “Ravenscroft reference does not disclose a retrieval means for retrieving the filter”. Instead, Ravenscroft does appear to disclose at least three retrieval means at column 5, line 65 to column 6, line 53. Although the retrieval catheter or similar tubular unit is not disclosed in great structural detail, its principles of operation appear to be outlined in sufficient detail so as to enable one of ordinary skill in the art to understand them. In a first embodiment of the retrieval device, Ravenscroft appears to insert a catheter or similar tubular member over the hub (12), which the Examiner has identified as corresponding to the apical head of the pending claims, and into engagement with the arms (18), if present, and subsequently to engage arms (26), identified as corresponding to a plurality of filter tubes, while the hub (12) is held stationary thereby forcing arms (18) and (26) downward. Advancing the catheter beyond the hub (12) to engage the arms indicates that the catheter

has an inner diameter large enough to pass the hub (12) and reach the arms without significant impediment since the hub must then be capable of being drawn into the catheter as the end of the catheter which engages the arms must urge the arms inward to disengage the hooks (28) and then encompass the entire filter within the catheter. [col. 5, line 65 to col. 6, line 6] In this first embodiment of a retrieval device, Ravenscroft appears to disclose a retrieval device comprising a single tubular unit or catheter having an inner diameter at least larger than the hub (12) and the collapsed filter as a whole, since the mouth of the catheter must be capable of engulfing the entire length of the collapsed filter, and a means for grasping the hub (12) within the tubular unit or catheter. In those embodiments in which the filter is formed from shape memory materials, “cooling fluid can be passed through the catheter to aid in collapsing the filter. In these embodiments, the principle of operation of the retrieval device requires a large inner diameter catheter, with or without a cooling fluid to pass over the filter while the apical head is held stationary.

In a second embodiment, long shafts (32) extend through tubular legs (26) into hub (12), which the Examiner has identified as corresponding to the apical head of the pending claims, where they connect to ring (34) on the end of pull rod (36). When each shaft (32) is pulled upward by pull rod (36), the hooks are pulled into the tubular legs (26). Then a removal tube is moved over the arms (20) and (26) to collapse the filter. Thus for filter removal, while the filter is still in place, the pull rod is grasped and the hooks are pulled into the tubular legs 26. Then a removal tube is moved over the arms 20 and 26 to collapse the filter. [col. 6, lines 12-24]

In a third embodiment of the filter/retrieval device as disclosed by Ravenscroft, a filter which comprises a hub (12), which the Examiner has identified as corresponding to the apical head of the pending claims; a second hub, which the Examiner has identified by the reference numeral 38 in Figure 8 of Ravenscroft; and a plurality of metal washers (40) formed of a thermal shape memory material and located between hub (12) and hub (38). In this embodiment, the principle of operation of the retrieval device requires that “when the washers are subjected to temperatures above their temperature transformation level, they bow upward along the longitudinal axis of the filter” thereby “driving hub 12

away from sleeve 38 so that the hub draws the shafts 32 upward to pull the hooks 28 into the tubular legs 26". The collapsed filter may then be removed. [col. 6, lines 27-53]

Each of the retrieval devices of Ravenscroft appear to operate by grasping the hub (12), which the Examiner has identified as corresponding to the apical head of the pending claims, or a pull rod connected thereto and advancing a tubular element which passes the hub (12) to engulf the entire collapsed filter. Although Ravenscroft appears to disclose a filter having a second hub (38) the various retrieval methods disclosed by Ravenscroft do not appear to disclose a middle tubular member configured to engage the hub. Accordingly, any modification of Ravenscroft which introduces an inner tubular member which engages the second hub (38) in order to collapse the filter would appear to impermissibly alter the principle of operation of the removal apparatus of Ravenscroft. (MPEP 2143.01, Part VI.)

The Examiner has proposed the use of the retrieval device of Suon in combination with the filter of Ravenscroft and has characterized the retrieval device of Suon as having a tubular inner member (51), a tubular middle member (60) that is capable of engaging the hub, and an outer sheath (40) for encapsulating the filter. Although the Examiner has not identified that embodiment of Suon to which he refers, it will be presumed that it is the embodiment of Figure 6 which appears to be the only embodiment in which elements 51, 60, and 40 appear together. Element (51) is characterized as a tubular shaft of stabilizer (50) from which elongate members (52) extend. Inner tubular member (51) does not appear to contact or otherwise interact with the hub (12) of Suon and so cannot be said to be "configured to grasp the apical head"; however it might broadly be characterized as a component of an inner member configured to grasp the apical head. Tubular middle member (60) is described at column 2, line 67 as capable of being advanced into engagement with struts (14) after filter (10) is grasped by stabilizer (50) which, as illustrated in Figs. 5 and 6, appears to require that it pass by not only hub (12), but also the radial extents of elongate members (52) in order to reach the struts (14) and thus cannot have an inner diameter commensurate with the hub (12), but must be significantly larger, in the case of Figure 6 of Suon about 3-6 times larger. Further, since the filter of Suon does not appear to have an element corresponding to hub (38) of Ravenscroft, the disclosure of Suon does not appear to be capable of teaching or

otherwise rendering obvious the use of “a middle tubular member configured to engage the hub”. Given the Examiner’s reliance upon Fig. 8 of Ravenscroft, it would appear that the disclosure of Suon, as it might be applied to Ravenscroft, would necessarily require that the inner diameter of catheter (60) be large enough to pass freely beyond the base of hub (12) and hub (38) in order to be capable of being advanced into engagement with struts (14) after filter (10) is grasped by stabilizer (50) which projects radially well beyond hub (12). Accordingly Suon does not appear to teach a middle tubular member configured to engage the hub as would be required to establish a *prima facie* case of obviousness. Were catheter (60) to be reduced in size to allow it to engage hub (38) there would appear to be no room for the elongate members (52) of stabilizer (50) between the hub (12) and the catheter (60) and additionally the reduction would appear to render the catheter (60) incapable of being advanced to engagement with the struts as required by the operation of Suon thus rendering the retrieval device of Suon inoperable for retrieving the filter of Ravenscroft. (MPEP 2143.01, Part V.) As noted above, the proposed substitution of a retrieval device of Suon which would engage hub (38) of any of the retrieval devices of Ravenscroft would appear to impermissibly alter the operating principles of the retrieval devices of Ravenscroft. (MPEP 2143.01, Part VI)

For at least the above reasons, Ravenscroft in view of Suon does not appear to teach all the claim limitations, as is required to establish a *prima facie* case of obviousness and Applicants respectfully request that the rejection of independent claim 16 be withdrawn.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). (MPEP 2143.03)

Accordingly, claims 17, 20, 21, 25, and 33-35, which depend from nonobvious independent claim 16, also are believed to be nonobvious and Applicants respectfully request that the rejections be withdrawn.

Claims 1, 2, 5, 6, 9, and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft in view of Suon and Whitcher et al. (U.S. Patent No.

6,273,901), hereinafter Whitcher. After careful review, Applicant must respectfully traverse this rejection.

The addition of the landing pad of Whitcher to Ravenscroft in view of Suon does not appear to address the fundamental deficiencies of those combined references as discussed above in greater detail. As noted above, catheter (60) of the retrieval device of Suon does not appear to be capable of both passing the elongate arms (52) of the stabilizer (50) once the arms have engaged the hub (12) and engaging the nonexistent hub (38) as it passes beyond the hub to engage struts (14). Were the catheter (60) to be reduced in inner diameter sufficiently to engage hub (38) of Ravenscroft, it would appear to be too small to pass the elongate arms (52) as well as too small to reach and collapse arms (18) and/or (26) of Ravenscroft. Accordingly, it would become unsuited for its intended purpose. Were the device of Figure 6 of Suon to be modified to allow catheter (60) to engage hub (38) of Ravenscroft rather than bypassing the hub to engage the arms, it would appear to impermissibly alter the principle of operation of the retrieval systems of Ravenscroft which appear to require that the tubular element which contains the collapsed filter engage the filter arms in order to cause the hooks (28) to disengage from the vessel wall. The proposed modification would appear to alter the operating principle of Suon as well. For at least these reasons, Ravenscroft in view of Suon and Whitcher does not appear to teach all the claim limitations, as is required to establish a *prima facie* case of obviousness and Applicants respectfully request that the rejection of independent claim 1 be withdrawn.

Accordingly, claims 2, 5, 6, 9, and 19, which depend from nonobvious independent claims 1 and 16 respectively, also are believed to be nonobvious and Applicants respectfully request that the rejections be withdrawn.

Claims 24 and 36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ravenscroft in view of Suon as applied to claims 16 and 35 and further in view of Herbert et al. (U.S. Patent No. 6,482,221), hereinafter Herbert. After careful review, Applicant must respectfully traverse this rejection.

The addition of a braided inner member of Herbert to Ravenscroft in view of Suon, even assuming that a braid would adequately support the stabilization member (50)

of Suon and allow elongated members (52) to grasp hub (12), does not appear to address the fundamental deficiencies of those combined references as applied to independent claim 16 discussed above in greater detail.

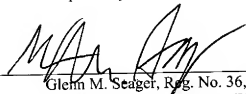
Accordingly, claims 24 and 36, which depend from nonobvious independent claim 16, also are believed to be nonobvious and Applicants respectfully request that the rejections be withdrawn.

In the Response to Arguments, the Examiner has asserted that a tubular element (60) of Suon would be capable of engaging the hub (38) of Ravenscroft. Apart from the fact that a retrieval device which engaged hub (38) of Ravenscroft rather than bypassing the hub (38) to engage the arms (18) and (26) thereby forcing them downward to disengage the hooks (col. 6, lines 1-5 or lines 16-24) or in the alternative which relied upon subjecting washers (40) to temperatures above their temperature transformation temperatures would alter the operating principles of the retrieval devices of Ravenscroft, Suon appears to teach that the catheter (60) must have an inner dimension sufficiently great to pass freely past the maximum diameter of the combination of hub (12) and elongate arms (52) of the stabilizer (50), said arms extending radially outward beyond hub (12). Even were this not the case, the operation of catheter (60), depicted as having a uniform inner dimension, apparently requires it to pass axially well beyond any structure such as washers (40) and hub (38) of Ravenscroft to engage arms (18) and (26) and thus its advancement cannot be impeded by premature engagement with hub (38) of Ravenscroft which does not appear to have an analogous structure in the filters to be retrieved by the devices of Suon. If the inner surface of the tubular member lies flush against the outer surface of the hub (38) and structure (40) as suggested by the Examiner, it would appear to either engage the surface of hub (38) and thus be incapable of reaching arms (18) and (26) as required by the principle of operation of the retrieval catheter of Ravenscroft or it would pass by and fail to engage hub (38), an engaging configuration being necessary to provide “a middle tubular member configured to engage the hub” as recited in claims 1 and 16. Catheter (60) of Suon does not appear to be capable of doing both simultaneously.

In view of the foregoing, all pending claims are believed to be in a condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested. Issuance of a Notice of Allowance in due course is anticipated. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

Date: Aug. 5, 2009



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